

# PATENT SPECIFICATION

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NO DRAWINGS



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## (54) A PLASTICS PRODUCT AND A METHOD FOR ITS MANUFACTURE

(71) We, SONESSON PLAST AB, a company duly organized and existing under the laws of Sweden, Limhammsvagen 108—110, of Malmö, Sweden, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

The present invention relates to an improved plastics product and a method for its manufacture.

There are prior art plastics products which comprises a jacket of a thermoplastic resin and a core of other material bonded to the jacket.

The object of the present invention is to provide a product of this kind which is more inexpensive and has several purposes of use, e.g. edgings for door frames or window frames, which are more suitable than prior art products, and a method for manufacturing such a product.

The invention consists in a plastics product comprising a jacket of thermoplastic resin and a core of another material bonded to the jacket, wherein the core consists of a thermosetting resin containing at least one filler, and when manufactured by the following method.

The invention further consists in a method of manufacturing an extruded plastics moulding suitable for edgings for door frames or window frames or the like, wherein the product is extruded in an extruder having two extruder units, one of which extrudes a thermoplastic resin jacket in a manner known per se, while the other one, which opens into the extruder head of the first extruder unit, extrudes into the jacket a thermosetting material forming a core therein, the temperature conditions being such that the core will harden or set immediately after the product has left the head of the extruder, while adhering to the inside of the jacket, so that the hardened or set core will provide a counter-pressure during the extrusion of the core material into the jacket, and so that

the said material is pressed against the inside of the jacket.

The core of the product consists, in the preferred embodiment, of an inexpensive filler, e.g. wood-dust, chalk or saw-dust, and carbamide resin. In order to achieve bonding and adhesion between the core and the jacket consisting of thermoplastic resin, a minor amount of thermoplastic resin may be mixed into the material which is to form the core, said thermoplastic resin being preferably of the same kind as the thermoplastic resin of the jacket, bonding being obtained without specific measures between the jacket and the core when the material forming the core is introduced into the jacket in a liquid state.

An especially advantageous product according to the invention consists of a profiled moulding of the type used for making door frames. One of the prior art mouldings for door frames consists of a profiled moulding of plastics having a hollow therein and a wooden core shaped to the configuration of the hollow in the moulding. This wooden core must consequently be milled or otherwise processed to the correct shape prior to being introduced into the hollow. A door frame of this type will therefore become relatively expensive. In accordance with the invention the wood core is replaced by a core made of the above-mentioned inexpensive material, which obtains its shape by being extruded into the hollow of the profiled moulding so as to fill it out.

It is also advantageous to provide such hollow profiled mouldings which are normally without cores and are used for making for instance boxes, but with a core according to the invention since the thickness of the jacket may be reduced to such a degree while retaining the strength properties, that the product becomes more inexpensive than previously despite the core.

Products according to the invention are manufactured with the aid of an extruder having two extruder units, one of which

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extrudes the thermoplastic resin jacket in the usual manner while the other one, which opens into the extruder head of the first extruder unit, extrudes the core material into the jacket. During this operation temperature conditions are such that the core will harden or set immediately after the product has left the head of the extruder, while adhering to the inside of the jacket so that the hardened or set core will provide a counter-pressure during the continued extrusion of the liquid material for the core into the jacket, and so that the material is carefully pressed against the inside of the jacket. The product according to the invention may consequently be made during a continuous manufacturing process, which is not the case in previously known products containing a wooden core, which can only be introduced in cut lengths.

The invention consequently provides a plastics product which is simple and inexpensive in manufacture, as well as easier to treat after manufacture than mouldings of the conventional kind, above referred.

#### WHAT WE CLAIM IS:—

1. A method of manufacturing an extruded plastics moulding suitable for edgings for door frames or window frames or the like, wherein the product is extruded in an extruder having two extruder units, one of which extrudes a thermoplastic resin jacket in a manner known per se, while the other one, which opens into the extruder head of the first extruder unit, extrudes into the

jacket a thermosetting material forming a core therein, the temperature conditions being such that the core will harden or set immediately after the product has left the head of the extruder, while adhering to the inside of the jacket, so that the hardened or set core will provide a counter-pressure during the extrusion of the core material into the jacket, and so that the said material is pressed against the inside of the jacket.

2. A plastic product when manufactured by the method of claim 1, comprising a jacket of thermoplastic resin and a core of another material bonded to the jacket, wherein the core consists of a thermosetting resin containing at least one filler.

3. A plastics product as claimed in claim 2, wherein the thermosetting resin, in addition to the filler, contains a minor amount of thermoplastic resin.

4. A plastics product as claimed in claim 2 or 3, wherein the thermosetting resin consists of carbamide resin and the filler consists of wood-dust.

5. A plastics product as claimed in any of the claims 2 to 4 substantially as hereinbefore described.

6. A method of manufacturing a plastics product substantially as hereinbefore described.

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